

REMARKS

Claims 13-20, 27-33, 35-40, and 55-66 are pending. Claims 13, 16, 18, 27, 38, 55-57, 60, and 65 are being amended. Claims 1-12, 21-26, 34, and 41-54 were previously canceled. No new matter is being submitted.

The applicants and their attorney greatly appreciate the Examiner's time and courtesy in discussing the case with the applicants' attorney by telephone on March 6, 2006. The telephone conference greatly helped the applicants to understand the Examiner's positions and allow this case to move forward.

A primary feature distinguishing an embodiment of the invention shown in Figures 1-5 is the use of a unitary spacer 21 positioned between first and second bodies 2, 3 and defining a completely enclosed cavity 22 that surrounds another region. The surrounded region can be a suspended active region 29 of an integrated electromechanical microsystem (MEMS) 1 (Figures 3 and 3A) or a plug 20 (Figs 1-5).<sup>1</sup> By defining a completely enclosed cavity between the two bodies, the integrated device 1 ensures sealing of the active regions and plug regions while enabling the two bodies to be self-aligned and welded together.

Claims 13-18, 27-30, 55-58, 60-62, and 65 were rejected under 35 U.S.C. § 102(b) as being anticipated by Chao et al. (5,633,535, hereafter "Chao").

Independent claims 13 and 27 are being amended as suggested by the Examiner.<sup>2</sup> For example, amended claim 13 is directed to a device forming an electromechanical or optical microsystem that includes a unitary spacer arranged near said electrically conductive region and extending between the first and second bodies, the spacer having at least three sides defining a first cavity surrounding an active region or a plug of the electromechanical or optical microsystem. Claim 27 is being amended in a similar manner.

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<sup>1</sup> Shown in Figures 6-7 is a micro-optical-electromechanical (MOEMS) device embodiment of the claimed invention. The applicant has not included a detailed discussion of this embodiment in order to simplify the discussion given that each of the independent claims reads on both embodiments.

<sup>2</sup> Claims 13 and 27 are believed to be amended as suggested by the Examiner. If the language is not exactly as suggested by the Examiner, the Examiner is respectfully requested to contact the undersigned attorney for a clarification.

Chao does not disclose the invention recited in claim 13. In contrast to the unitary spacer having three sides that define a first cavity, Chao shows only spacer pedestals 40 that do not define a cavity surrounding another region. Each spacer pedestal 40 is completely solid, so no single one of the spacer pedestals 40 even defines two sides of a cavity, let alone three sides. At best, if two of the pedestals are considered together, they might define two sides of a cavity, but such two pedestals are not a “unitary spacer” and do not have “at least three sides defining a first cavity.” Consequently, Chao does not anticipate claim 13.

Claims 14-20 depend on claim 13, and thus, are also not anticipated by Chao

Although the language of independent claim 27 is not identical to that of claim 13, the allowability of claim 27 will be apparent in view of the above discussion of claim 13. Claims 28-30 depend on claim 27, and thus, are also not anticipated by Chao.

Chao also does not disclose the invention recited in independent claim 55, as amended. Claim 55 recites a device with a single spacer extending between the first and second bodies and including a completely enclosed first cavity that surrounds an active region of an electromechanical or optical microsystem. As discussed above, the Examiner points to the pedestals 40 of Chao, but no single one of those pedestals completely encloses a first cavity. Instead, each pedestal 40 is a completely solid object with no cavity shown or disclosed therein. Even if two of the pedestals 40 are considered as a group, Chao still does not disclose the claimed inventions, because two pedestals cannot be “a single spacer” and two pedestals cannot include “a completely enclosed first cavity.” Accordingly, claim 55 is not anticipated by Chao.

During the telephone conference, the Examiner suggested canceling claim 55. However, the applicant does not understand the Examiner’s reason for canceling claim 55. It seems that if the Examiner’s suggested language of “the spacer having at least three sides defining a first cavity” makes claim 13 allowable over the cited prior art, then the language of claim 55 stating “the spacer including a completely enclosed first cavity” would also distinguish the claimed invention from the recited prior art. If the Examiner continues to reject claim 55, the applicant respectfully requests the Examiner to explain how Chao’s pedestal 40 or any other part of Chao is a spacer with a completely enclosed first cavity.

Claims 56-66 depend on claim 55, and thus, are also not anticipated by Chao. In addition, claim 56 further recites that the spacer includes a completely enclosed second cavity in which an electrically conductive region is positioned. As discussed above, Chao does not disclose a spacer that defines any completely enclosed cavities, and thus, Chao does not anticipate the invention recited in claim 56.

Claims 19-20, 31, 59, 63-64, and 66 were rejected under 35 U.S.C. § 103 over Chao in view of Yew et al. (U.S. 6,137,164, hereafter "Yew").

The combination of Chao and Yew does not teach or suggest the invention recited in claims 19-20, 31, 59, 63-64, and 66. Claims 19-20, 31, 59, 63-64, and 66 each depend on one of independent claims 13, 27, and 55 discussed above. Yew is completely silent with respect to spacers or pedestals, and thus, cannot supply the teachings that are missing from Chao. Given that Yew is being cited only for its teaching of metal regions, there seems to be no need to discuss Yew in more detail with respect to the spacer. Accordingly, claims 19-20 and 31 are not rendered obvious by the cited prior art.

Claims 32-33 and 35-40 have been rejected under 35 U.S.C. § 103 over Chao and Yew in view of Duboz et al. (U.S. 5,726,500, hereafter "Duboz").

The combination of Chao, Yew, and Duboz does not teach or suggest the invention recited in claims 32-40. Claims 32-40 depend on claim 27, and thus, include the limitations of claim 27 discussed above. Like Yew, Duboz is completely silent with respect to spacers or pedestals, and thus, cannot supply the teaching that are missing from Chao. Given that Duboz is being cited only for teaching of optical components<sup>3</sup>, there seems to be no need to discuss Duboz in more detail with respect to the spacer. Accordingly, claims 32-33 and 35-40 are not rendered obvious by the cited prior art.

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<sup>3</sup> The present amendment does not discuss the optical elements of claims 32-40 in detail because such a discussion would be a distraction from the primary focus of the invention. However, the applicants continue to submit that Duboz does not teach or suggest the claimed features attributed to it by the Examiner. Thus, if the Examiner continues to reject claims 32-40 based on Duboz, the applicants respectfully request that the Examiner identify the structures in Duboz thought to teach the features of claims 32-40.

Application No. 10/060,068  
Reply to Office Action dated October 5, 2005

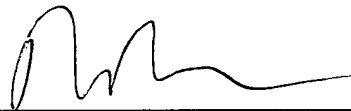
The applicants believe that the present amendment resolves all issues remaining in this case. If the Examiner discovers any further issues, the Examiner is respectfully requested to contact Mr. Iannucci for a telephone conference.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are now clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

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